GA4/1616

Patent
Atty. Dkt. No.LYNN/0120

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

7/a

In re Application of: §
Waheguru Pal Singh §
§
Serial No.: 09/733,611 §
§
Filed: December 08, 2000 §
§
For: Methods of Sterilizing with §
Dipercarboxylic Acids §

Group Art Unit: 1616

Examiner: Sabiha N. Qazi

Bat
3-22-02

Assistant Commissioner of Patents
Attn: Box Response
Washington, D.C. 20231

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231, Attn: Box Response, on the date below:

2/19/2002 Teresa Gonzalez
Date Signature

Dear Sir:

RESPONSE TO OFFICE ACTION MAILED DECEMBER 20, 2001

Applicant files this Response to the first office action mailed December 20, 2001, having a three-month response period set to expire on March 20, 2001.

IN THE CLAIMS:

Please cancel claims 12-16, and 18-25.

REMARKS

The Examiner, pursuant to 35 U.S.C. 121, has included in the office action a requirement for restriction. Applicant hereby affirms the election to prosecute the invention of claims 1 through 11 and claim 17. Claims 12 through 16 and claims 18 through 25 are

hereby cancelled.

Claims 1-11 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lokkesmoe, et. al, (US Patent 5,674,538), which teaches a method of controlling microbial growth in an aqueous stream using percarboxylic acid, which the Examiner asserts embraces Applicant's claimed invention.

Applicant respectfully disagrees. Applicant claims a method for preparing a sterilizing solution comprising storing a solid material comprising dipercarboxylic acid and dissolving the dry solid material into water to provide the sterilizing solution. As Applicant states in the specification, a need exists for compositions and methods that provide effective sterilizing solutions without concerns for stability and shelf life, or transportation of hazardous and bulky solutions. Applicant's invention solves this long-sought need by providing a method of using dipercarboxylic acids in solid form for use at a later time as a solute in an aqueous sterilization solution.

As stated in the MPEP, § 2143, it is the Examiner's responsibility to present a *prima facie* case of obviousness, meeting three requirements. First, there must be some suggestion or motivation in the references or within the knowledge of one having ordinary skill in the art, to modify the teaching of the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. Applicant respectfully asserts that the Examiner has failed to present a prima facie case of obviousness.

Lokkesmoe does not teach or suggest all the claim limitations of the present invention. First, Lokkesmoe does not teach or suggest the use of a dipercarboxylic acid. While Lokkesmoe discloses that carboxylic acids occur having one, two, three or more carboxyl groups, Lokkesmoe does not suggest that all the carboxyl groups should be converted to percarboxyl groups. In fact, while glutaric acid has two carboxyl groups, Lokkesmoe refers to "perglutaric acid" (Column 5, line 3) rather than diperglutaric acid (claim 7). Second, Lokkesmoe does not indicate that dipercarboxylic acids may be produced as a solid, stored, and then solubilized as a sterilizing solution as claimed by Applicant. There is no suggestion

or teaching that any of the peracids presented by Lokkesmoe may be produced as a solid or stored as a solid for later use in a sterilization solution. Furthermore, as pointed out in Applicant's specification (page 1, lines 19-28), only certain peracids are capable of being isolated as a solid material, then solubilized sufficiently to form a sterilizing solution.

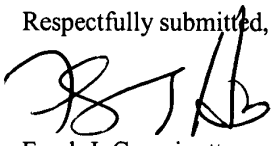
Indeed, Lokkesmoe teaches the use of stabilizing agents in the liquid "to stabilize the peracid and hydrogen peroxide and prevent the premature oxidation of this constituent within the composition of the invention." (Col. 6, lines 24-27). Therefore, Lokkesmoe recognizes the highly instable character of peracids and hydrogen peroxide, but does not recognize and does not teach or suggest that the peracids may be produced as a solid and stored for later use. Indeed Lokkesmoe incorporates by reference another of his patents, US Patent No. 5,122,538. (Column 8, Line 28). In Lokkesmoe '2,538, Lokkesmoe states, "Shipping dilute solutions of peroxy acids, i.e., about 5% peroxy acid in water, increases shipping costs due to the dilute nature of the product, while shipping more concentrated peroxy acids is a potentially hazardous process as peroxy acids can be explosive." (Col.1, Lines 15-20). In the Lokkesmoe '4,538 patent cited by the Examiner, Lokkesmoe suggests generating peracids on site, presumably to avoid the cost and hazards associated with shipping peroxy acids. (Column 8, Lines 22-32). Therefore, while recognizing the problem solved by Applicant, Lokkesmoe does not teach or suggest shipping and storing a peracid as a solid until needed. Instead, the reference teaches building a facility close to the use site to prevent having to ship and store liquid peracid.

Applicant therefore respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness as required. No teaching or suggestion of storing a dry solid dipercarboxylic acid is presented in the reference presented by the Examiner. There is no teaching or suggestion of making a solid form of dipercarboxylic acid that can then be solubilized in water at a sufficiently high concentration to be a potent sterilization agent. Since there is no such teaching or suggestion, there is also no expectation of success. Indeed, Lokkesmoe suggests producing liquid peracids at the site of use because of the cost and hazards of transporting liquid peracids. Those having ordinary skill in the art have not

recognized that solid peracids can be produced, stored and later solubilized in a sufficiently high concentration to form a sterilization solution. The Examiner has presented no reference that teaches or suggests that solid peracids can be stored as a solid and used as a sterilizing agent at a later date. The references presented by the Examiner have recognized the problems of peracid instability, transportation and storage, but do not teach or suggest Applicant's method of solving the problem. Therefore, there is no teaching or motivation to modify the reference presented by the Examiner to use a solid peracid in the method of the present invention. Applicant respectfully requests reconsideration and withdrawal of the rejection.

In light of the foregoing remarks and amendments, Applicant asserts that all of the pending claims are now in condition for allowance. Furthermore, if the Examiner believes that a telephone conference would be beneficial or serve to expedite the present application, please contact me at your convenience. Commissioner has permission to charge deposit account number 50-0714/LYNN/0120 for any fees associated with this filing, including extension of time fees.

Respectfully submitted,



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